

## II. Remarks

Claims 1, 3, and 5-22 are pending in this case. Of these, claims 1 and 22 are independent. All of these claims stand rejected as being anticipated by, or in the alternative obvious over, the teaching of Car, U.S. Pat. No. 4,462,835. As to the instantly claimed composition, the examiner more particularly contends that Car '835 teaches a composition that is 70-85% perlite, 2.5 to 23% water glass, and having a bulk density of 150 kg/m<sup>3</sup>. To the extent that the ranges of Car '835 and those of Applicants' invention are dissimilar, the examiner argues that the instantly claimed ranges would have been *prima facie* obvious. As to Applicants' claimed process, the examiner argues that the same "would appear to involve mixing and molding the materials which is within the teaching of Car." Official Action, p. 2. Applicants disagree.

Car '835 teaches a lightweight building material comprising densely packed grains of an additive connected together by a bonding agent. Car '835 particularly teaches that the bonding agent is water-glass, while the additive is perlite ("which may be replaced in part by other highly porous additives, for example vermiculite, expanded clay, foamed glass, lightweight pumice and pumicite of the like"), bentonite, kaolin, rice-husk ashes, fire-clay, calcium silicates such as wollastonite, kyanite, aluminum hydrate, feldspar and substitutes, rock-granules, quartz granules, and other silicic acid products. Col. 3, lines 65-68; col. 4, lines 4-12. In formation of the lightweight building material thereof, Car '835 teaches that the additive and bonding agent are mixed for about 2-3 minutes, whereafter the mixture is allowed to stand until it solidifies (about 20 minutes).

Col. 3, lines 8-21. Presumably this process takes place at room temperature, as no other environmental conditions are specified.

In contrast to the composition and process of Car '835, Applicants' invention pertains to a *sintered* (i.e., formed by heating without melting) product, and process of making the same, obtained from a lightweight aggregate and a sintering auxiliary. Car '835, which decidedly fails to teach any use of heat in the production of the lightweight building material thereof, plainly does *not* anticipate or render obvious Applicants' invention *at least* for this reason.

Notwithstanding the foregoing, Applicants further note that Car '835 utterly fails to teach a sintered product, or process of making the same, obtained by mixing a lightweight substance of 80 to 93 wt% of a lightweight aggregate selected from the group consisting of expanded glass, scrap glass, and mixtures thereof, as instantly claimed.

Respecting claim 3, Car '835 does not disclose the claimed compressive strength. And, in view of the prior art's failure to teach a sintered product, Applicants submit that any argued inherency of such characteristic in the product of Car '835 cannot be maintained.

Respecting claim 7, the failure of Car '835 to teach sintering precludes anticipation of the instantly claimed process of adjusting the compressive strength and/or bulk density as a function of the lightweight aggregate and the process parameters during sintering.

Respecting any of claims 6 and 8-10, Car '835 is not anticipatory at least for the failure of that reference to teach any heating steps in the production of the lightweight building material thereof.

Finally, Applicants note that Car' 835 fails to teach or motivate a sintered product used as any of a furnace lining, a brick for formation of exhaust installation, technical sound protection in interior rooms, a sound-absorbing segment for fixed passageways of rail vehicles, a fireproofing element, or a sound absorber in exhaust lines, all as instantly claimed.

III. Conclusion

In view of the above, Applicants submit that the claims stand in condition for immediate allowance. Of course, the examiner is invited to contact Applicants' undersigned counsel at (734) 662-0270 if he should have any questions respecting this paper, or if a telephone interview might otherwise expedite the prosecution of this case.

Respectfully submitted,

Christopher A. Mitchell  
Reg. No. 40,729

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